Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

a cascoded output switch having a pair of output devices and a pair of cascode devices;

a resistor providing tail current to the output devices;

a predriver circuit receiving an input signal and controlling the output devices;

a feedback circuit coupled to the resistor to control a modulation current of the output devices by control of bias on the predriver circuit;

a common mode feedback circuit providing modulation dependent currents for the predriver circuit; and,

a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to a power supply voltage, the output bias current and the modulation current.

2. (Previously Presented) The LD/EAM driver of claim 1 further comprised of an output bias circuit providing for on-chip summation of the modulation and an output bias current at a low impedance node of the active cascode device.

3. (Canceled)

4. (Previously Presented) The LD/EAM driver of claim 1 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit.

5. (Original) The LD/EAM driver of claim 4 wherein the modulation current is externally adjustable.

6. (Original) The LD/EAM driver of claim 1 wherein the modulation current is externally adjustable.

7. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable.

8. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable by a single external adjustment.

9. (Original) The LD/EAM driver of claim 1 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are independently externally adjustable.

10. (Original) The LD/EAM driver of claim 1 further comprised of a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

11. (Previously Presented) The LD/EAM driver of claim 10 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit.

12. (Original) The LD/EAM driver of claim 11 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

Claims 13-21 (Canceled)

22. (Previously Presented) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

a cascoded output switch having a pair of output devices and a pair of cascode devices;

a resistor providing tail current to the output devices;

a predriver circuit receiving an input signal and controlling the output devices;

a feedback circuit coupled to the resistor to control a modulation current of the output devices by control of bias on the predriver circuit;

a common mode feedback circuit providing modulation dependent currents for the predriver circuit;

a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to a power supply voltage, an output bias current and the modulation current;

a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit; and,

a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

23. (Original) The LD/EAM driver of claim 22 wherein the modulation current is externally adjustable.

24. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable.

25. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are externally adjustable by a single external adjustment.

26. (Original) The LD/EAM driver of claim 22 wherein the LD/EAM driver is an integrated circuit and the predriver bias current control and the modulation current are independently externally adjustable.

27. (Canceled)

28. (Previously Presented) The LD/EAM driver of claim 26 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

29. (New) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

a cascoded output switch having a pair of output devices and a pair of cascode devices;

a resistor providing tail current to the output devices;

a predriver circuit receiving an input signal and controlling the output devices;

a feedback circuit coupled to the resistor to control a modulation current of the output devices by control of bias on the predriver circuit;

a common mode feedback circuit providing modulation dependent currents for the predriver; and,

a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

30. (New) The LD/EAM driver of claim 29 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit.

31. (New) The LD/EAM driver of claim 30 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

32. (New) A laser diode/electro-absorption-modulator (LD/EAM) driver comprising:

a cascoded output switch having a pair of output devices and a pair of cascode devices;

a resistor providing tail current to the output devices;

a predriver circuit receiving an input signal and controlling the output devices;

a feedback circuit coupled to the resistor to control a modulation current of the output devices by control of bias on the predriver circuit;

a common mode feedback circuit providing modulation dependent currents for the predriver circuit;

a cascode bias circuit coupled to bias the cascode devices to a bias voltage responsive to a power supply voltage, an output bias current and the modulation current; and,

a pulldown variance circuit coupled to the predriver, the pulldown variance circuit causing a turnoff current of the predriver to be larger than a turn-on current of the predriver.

33. (New) The LD/EAM driver of claim 32 further comprised of a PTAT bandgap reference circuit to generate biasing currents with positive temperature coefficients for the predriver circuit.

34. (New) The LD/EAM driver of claim 33 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.

35. (New) The LD/EAM driver of claim 34 wherein the pulldown variance circuit is responsive to the output of the bandgap reference.